

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (canceled)

Claim 2 (currently amended): The method of ~~claim 1~~ claim 7 wherein the step of forming the metal bumps comprises stud bumping.

Claim 3 (currently amended): The method of ~~claim 1~~ claim 7 wherein the step of forming the metal bumps comprises electroplating.

Claim 4 (currently amended): The method of ~~claim 1~~ claim 7 wherein the metal bumps comprise gold.

Claim 5 (currently amended): The method of ~~claim 1~~ claim 7 wherein the step of heating the bumps comprises heating the die.

Claim 6 (currently amended): The method of ~~claim 1~~ claim 7, further comprising supporting the bonding fingers on a substrate, and supporting the die by a press, wherein the step of pressing the bumps against the bonding fingers comprises applying a force to move the die and the substrate toward one another.

Claim 7 (currently amended): ~~The method of claim 1~~ A method for connecting a die to a leadframe, comprising:

forming metal bumps on the die,

contacting the bumps with bonding fingers on a leadframe,

heating the bumps without melting, and

pressing the bumps against the bonding fingers,

wherein the heating step and the pressing step are carried out at a temperature and pressure sufficient to result in deformation of the bump material to an extent of between about 15% and about 20% of the original bump height.

Claim 8 (currently amended): The method of ~~claim 1~~ claim 7 wherein the metal bumps comprise gold, and the heating step comprises heating the bumps to a temperature in the range about 100° C. to about 400° C., and the pressing step comprises applying a force equivalent to vertically loading in the range about 10 grams to 250 grams per bump.

Claim 9 (canceled)

Claim 10 (currently amended): The method of ~~claim 1~~ claim 7 wherein the fill material comprises an adhesive resin.

Claim 11 (canceled)

Claim 12 (currently amended): The method of claim 11 A method for forming a plurality of chip-in-leadframe packages, comprising

providing a plurality of leadframes each comprising a set of bonding fingers,

providing a plurality of dies each having a set of metal bumps formed thereon,

positioning the leadframes onto a support,

placing the dies onto the leadframes such that each set of bumps contacts a set of bonding fingers,

heating the bumps without melting, and

pressing the dies against the leadframes to compress the bumps onto the bonding fingers,

wherein the metal bumps comprise gold, and the heating step comprises heating the bumps to a temperature in the range about 100° C. to about 400° C., and the pressing step comprises applying a force equivalent to vertically loading in the range about 10 grams to 250 grams per bump.

Claim 13 (currently amended): The method of claim 11 claim 12, further comprising the steps, prior to contacting the bumps with the binding fingers of the leadframe, of

supporting the leadframe on a substrate, and

dispensing a measured quantity of a fill material onto the substrate within each set of leadframe binding fingers.

Claim 14 (currently amended): The method of claim 11 claim 12, further comprising the steps of singulating the chip-in-leadframe packages.

Claim 15 (canceled)

Claim 16 (currently amended): The package of claim 15 A chip-in-leadframe package made according to the method of claim 14 wherein the die is situated cavity upward in relation to the set of bonding fingers.

Claim 17 (currently amended): The package of claim 15 A chip-in-leadframe package made according to the method of claim 14 wherein the die is situated cavity downward in relation to the set of bonding fingers.

Claim 18 (currently amended): The package of claim 15 A chip-in-leadframe package made according to the method of claim 14 wherein the leads fan inwardly.

Claim 19 (currently amended): The package of claim 15 A chip-in-leadframe package made according to the method of claim 14 wherein the leads fan outwardly.

Claim 20 (currently amended): The method of claim 11 claim 12 wherein the heating step and the pressing step are carried out at a temperature and pressure sufficient to result in deformation of the bump material to an extent of between about 15% and about 20% of the original bump height.

Claim 21 (New): The method of claim 7, further comprising a step of overmolding to enclose the die and leadframe fingers.

Claim 22 (New): The method of claim 12, further comprising a step of overmolding to enclose the die and leadframe fingers.